

REMARKS

Claims 1 – 3, 5, 11, 18, 20, 22 – 25, 31, 47, 49 – 56, 58, and 60 – 61 are pending. Claims 1, 11, 47, 49, and 58 have been amended. Claims 4, 48, and 59 have been cancelled. No new matter has been introduced. Reexamination and reconsideration of this application are respectfully requested.

In the June 23, 2005 Office Action, the Examiner rejected claims 1, 2, 18, 47, and 57 under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 5,946,202 to Balogh (“the Balogh reference”) in view of U.S. Patent No. 5,119,283 to Steigerwald et al. (“the Steigerwald reference”). The Examiner rejected claim 3 – 5, 11, 20, 48 – 51, 57, and 59 under 35 U.S.C. § 103(a) as being unpatentable over the Balogh reference in view of the Steigerwald reference in view of U.S. Patent No. 6,650,560 to Macdonald et al. (“the Macdonald reference”). The Examiner rejected claims 23 – 25, 31, 52 – 56, 58, 60, and 61 under 35 U.S.C. § 103(a) as being unpatentable over the Balogh reference in view of the Steigerwald reference in view of the Macdonald reference and further in view of U.S. Patent No. 6,504,423 to Riggio et al. (“the Riggio reference”). These rejections are respectfully traversed in so far as they are applicable to presently pending claims.

The applicant understands the Examiner’s utilization of the Steigerwald reference. The applicant has amended the claims to highlight the feature of the invention which was originally in claim 4. The applicant notes that the Examiner never directly addresses the limitation of claim 4, which is now the highlighted limitation of claim 1.

Claim 1, as amended, recites:

A power converter, comprising:

an input voltage system to receive an AC input voltage and to output a switched voltage;

a transformer, coupled to said input voltage system, to receive the switched voltage and to output an intermediate voltage, said transformer having a primary winding and a single secondary winding ;

a boost circuit, coupled to the transformer, to receive the intermediate voltage and output an increased voltage; and

a buck regulator to receive the increased voltage, to generate a regulated voltage, and to output the regulated voltage as an output voltage and **also to output a reference voltage in addition to the output voltage**,

wherein said single secondary winding of said transformer is utilized as a boost inductor in the boost circuit and leakage inductance between the primary winding and the secondary winding is not utilized to boost the intermediate voltage to the output voltage.

The Examiner, in rejecting claims 3 – 5 states that the Balogh reference and the Steigerwald reference disclose the claimed invention except for the user of a buck regulator circuitry and current programming circuitry. (*Office Action, page 3*). The applicant agrees with the Examiner and respectfully submits that claim 1, as amended, distinguishes over the Balogh and Steigerweld references, alone or in combination, because neither of the references disclose a buck regulator circuitry.

The MacDonald reference does not make up for the deficiencies of the Balogh and Steigerweld references. The Examiner states that the MacDonald reference discloses a buck regulator along with other current and voltage feedback circuitry. (*Office Action, page 3*). The MacDonald reference, however, does not disclose that the buck regulator receives the increased voltage, generates a regulated voltage, and outputs the regulated voltage as an output voltage and **also outputs a reference voltage in addition to the output voltage**, as recited in claim 1. The Examiner never specifically identifies that the MacDonald reference discloses the highlighted limitation. In addition, the MacDonald reference does not disclose that a reference voltage in

addition to the output voltage is output from the buck regulator. In contrast, the MacDonald reference discloses that only the output voltage is sent out from the buck regulator. Accordingly, applicant respectfully submits that claim 1, as amended, distinguishes over the MacDonald / Balogh / Steigerwald combination.

Independent claim 47, as amended, recites limitations similar to claim 1, as amended. Accordingly, applicant respectfully submits that independent claim 47 distinguishes over the Balogh / Steigerwald / MacDonald combination for reasons similar to those discussed above in regard to claim 1, as amended.

Claims 2 - 3, 5, 11, 18, 20, and 49 - 51 depend, indirectly or directly, on claims 1 and 47, both as amended. Accordingly, applicant respectfully submits that dependent claims 2 – 3, 5, 11, 18, 20, and 49 - 51 distinguish over the Balogh / Steigerwald / MacDonald combination for the same reasons as those discussed above in regard to independent claim 1, as amended.

As the applicant noted in the prior Office Action, the applicant believes that the Examiner's utilization of the Riggio reference as a fourth level reference for disclosing an application of a DC voltage to a center tap of a secondary winding of a transformer is incorrect for claims 23 – 25, 31, 52 – 56, and 58. We note that the Examiner continues to state the same language in rejecting the above-identified claims. The Examiner never addresses the language of the claim limitations which recites that the center tap of the transformer is on the secondary winding of the transformer. As noted previously, the Riggio reference is disclosing the application of a DC voltage to a primary winding of a transformer, which is not a **secondary** winding of a transformer. Accordingly,

independent claims 52, 58, and 60 distinguishes over the cited references. Specifically, independent claim 58, as amended, recites:

A power converter capable of receiving an AC input voltage and a DC input voltage, comprising:
a first capacitor, coupled to the DC input voltage, which is charged to the DC input voltage;
a transformer, coupled to a primary switching circuit and utilized if an AC input voltage is supplied, said transformer having a primary winding and a secondary winding where the secondary winding includes a center tap to separate the secondary winding into a first autowinding and a second autowinding and the DC input voltage is connected to the center tap of secondary winding of the transformer; and
a control circuit coupled to switching devices, the switching devices coupled to the secondary winding, where the control circuit and the switching devices control the first autowinding and the second autowinding to charge a second capacitor to a DC voltage, wherein the DC input voltage and the DC voltage are added together to create an increased voltage at a first node.

The Examiner states that the Balogh, Steigerwald, and MacDonald references do not disclose having a DC input supplied to the center tap of the transformer. (*Office Action, page 4*). The applicant agrees and respectfully submits that claim 58 distinguishes over the Balogh / Steigerwald / MacDonald combination.

The Riggio reference does not make up for the deficiencies of the MacDonald reference. As was noted previously in the April 28, 2005 amendment and the January 10, 2006 amendment, in making this statement, the Examiner is not addressing the highlighted claim limitations recited above. Claim 58 recites that a DC input voltage is connected to a center tap of a secondary winding of the transformer. The Examiner instead states that DC input is applied to a center tap of the transformer. Specifically, the Riggio reference discloses that a DC voltage is applied to a center tap of a primary winding (*Riggio, Fig. 2, col. 10, lines 5 – 10*) not a center tap of a secondary winding, as is recited in claim 58. The Examiner's cited statement that the Riggio reference discloses that providing a DC input to the center tap of the transformer for purpose of providing galvanic isolation and minimum voltage overshoot in the

secondary and thus minimizing the filtering requirements illustrates that the Riggio reference does not disclose applying the DC input voltage to the center tap of a secondary winding. The application of the DC input voltage to the center tap of the secondary winding would not provide galvanic isolation and minimum voltage overshoot in the secondary winding because the DC input is being applied directly to the secondary winding and thus no isolation could occur with the secondary winding. Therefore, the reasoning of the Examiner utilizes to show that it is proper to combine the MacDonald reference with the Riggio reference is incorrect because the galvanic isolation and minimum voltage overshoot could not occur. Further, the application of the DC input voltage to the secondary winding also would not minimize the filtering requirements because the DC input is input directly into the secondary winding and would not be filtered. Accordingly, claim 58, as amended, distinguishes over the Riggio / Balogh / Steigerwald / MacDonald combination.

Claim 58 further distinguishes over the cited references. The Examiner did not explain in the office action how any of the cited references disclose a control circuit coupled to switching devices, the switching devices coupled to the secondary winding, where the control circuit and the switching devices control the first autowinding and the second autowinding to charge a second capacitor to a DC voltage, wherein the DC input voltage and the DC voltage are added together to create an increased voltage at a first node, as is recited in claim 58, as amended. The MacDonald reference, the Balogh reference, and the Steigerwald reference do not disclose the utilization of a first autowinding and a second autowinding of the secondary winding. The Examiner never states how the Riggio reference makes up for this

deficiency because he never points out which figure and associated part of the specification discloses the above-highlighted limitation. Accordingly, applicant respectfully submits that claim 58, as amended, further distinguishes over the Balogh // Steigerwald / MacDonald / Riggio reference combination.

Independent claims 52 and 60 recite limitations similar to those recited in claim 58. Accordingly, applicant respectfully submits that independent claim 52 and 60 distinguish over the Balogh / Steigerwald / MacDonald / Riggio combination, for similar reasons to those discussed above in regard to independent claim 52.

Claims 23 – 25, 31, and 53 - 56 depend, indirectly or directly, on independent claims 58 and 52, respectively. Accordingly, applicant respectfully submits that claims 23 – 25, 31, and 53 - 56 distinguish over the Balogh / Steigerwald / MacDonald / Riggio combination, for the same reasons as discussed above in regard to independent claim 58.

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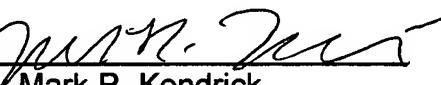
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Applicant believes that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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